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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,750	09/21/2005	Daniel Ballin	36-1940	1312
23117 7590 04/14/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
BELOUSOV, ANDREY				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/549,750

**Applicant(s)**

BALLIN ET AL.

**Examiner**

ANDREY BELOUSOV

**Art Unit**

2174

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)  
Paper No(s)/Mail Date 10/10/2007, 12/21/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to the original filing of 9/25/2005. Claims 1-42 are pending and have been considered below.

#### ***Claim Objections***

Claim 3, 6, and 7 are objected to because of the following informalities: Claim 3 appears to omit claim dependency. In claim 6, the 'observer' appears that it should be 'observe,' and also appears to omit 'to' before 'the respective designated.' Claim 7 omits 'in' before 'claim 1.' Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Liebermann (5,982,853.)

**Claim 1, 35, 39, 40:** Liebermann discloses a behavioural translator arranged for use by a behavioural controller of an object, the translator arranged to map information representing behaviour conforming to a first demographic group to behaviour conforming to a second demographic group, the behavioural translator comprising:

- a. means to receive input (Fig. 5A-C);
- b. means to process (Fig. 1: THE CENTER) said input to associate the received input with behaviour (Fig. 1: speech or pertinent data from gestures) by the object conforming to the first demographic group (Fig. 1: deaf or hearing person) and
- c. means to map the behaviour derived from the received input to output generating behaviour (Fig. 1: sequence of images or synthesized speech) conforming to the second demographic group (Fig. 1: deaf or hearing person.)

**Claim 2:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein a demographic group comprises a nationality, religion, social class, occupation or social background (hearing / non-hearing, Abstract.)

**Claim 3:** Liebermann discloses a behavioural translator as claimed in claim, wherein the object is a virtual object (12:53-61, virtual animated avatar) participating in a virtual environment.

**Claim 4:** Liebermann discloses a behavioural translator as claimed in claim 3, wherein the virtual object is arranged to operate within a virtual environment comprising any one of the group of virtual environments consisting of: a virtual computer game, a virtual on-line meeting, an on-line game, an on-line chat-room, an avatar hosted meeting; an avatar counselling meeting; an avatar based mediation environment; an avatar based

sales environment; an on-line collaboration environment; an on-line customer relationship management environment (Abstract.)

**Claim 5:** Liebermann discloses a behavioural translator as claimed in claim 3, wherein the virtual object comprises an avatar (12:53-61, recorded animation sequences), and the first demographic group comprises a demographic group designated by a participant in the virtual environment located remotely from another participant in the virtual environment, wherein the second demographic group is designated by the other participant (Fig. 3.)

**Claim 6:** Liebermann discloses a behavioural translator as claimed in claim 5, wherein both participants each observe the avatar behaving according to the respective designated demographic group simultaneously (3:33-38.)

**Claim 7:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the information is received as input by the behavioural controller (the center, Fig. 3.)

**Claim 8:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the information is to be provided as output by the behavioural controller (the center, Fig. 3.)

**Claim 9:** Liebermann discloses a behavioural translator as claimed in claim 1 and arranged to translate at least one of the following behavioural actions: posture; tone of voice; gesture (Fig. 14A); eye gaze; object proximity during an interaction between the objects; and etiquette; an action representing social status.

**Claim 10:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the object comprises a virtual character (12:53-61, virtual animated avatar) in a virtual environment, wherein the translator is arranged to translate the appearance of the virtual character according to a designated demographic group (Fig. 15.)

**Claim 11:** Liebermann discloses a behavioural translator as claimed in claim 10, wherein the appearance which is translated comprises one or more items of clothing and/or the manner in which an item of clothing is worn by the virtual character (12-40:52.)

**Claim 12:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the behaviour is generated using a behavioural controller (Fig. 1.)

**Claim 13:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein said means to receive input is arranged to receive input associated with one or more behavioural actions (Fig. 1: speech or pertinent data from gestures) associated with the first demographic group (Fig. 1.)

**Claim 14:** Liebermann discloses a behavioural translator as claimed in claim 13, wherein said means to process comprises: means to infer a plurality of behavioural parameter values from said input in accordance with a behavioural framework arranged to generate equivalent behaviour by the object; and means to derive output from the inferred plurality of behavioural parameter values (Fig. 7.)

**Claim 15:** Liebermann discloses a behavioural translator as claimed in claim 14, wherein said mapping means comprises means to generate said equivalent behaviour by the object by mapping the output derived from the inferred plurality of behavioural parameter values to output which translates the one or more behavioural actions to equivalent behaviour associated with the second demographic group (Fig. 7.)

**Claim 16:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein said equivalent behaviour conveys the same sentiment as the behavioural actions associated with the first demographic group (Fig. 7.)

**Claim 17:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the equivalent behaviour comprises not performing a behavioural action (Fig. 11.)

**Claim 18:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the equivalent behaviour comprises a series of behavioural actions demographic group (10:59-63.)

**Claim 19:** Liebermann discloses a behavioural translator as claimed in claim 14, wherein the framework has an internally flexible structure (Fig. 7, AI.)

**Claim 20:** Liebermann discloses a behavioural translator as claimed in claim 14, wherein the framework comprises a hierarchy of behavioural nodes (Fig. 9.)

**Claim 21:** Liebermann discloses a behavioural translator as claimed in claim 14, wherein the framework is dynamically flexible (Fig. 7, AI.)

**Claim 22:** Liebermann discloses a behavioural translator as claimed in claim 1, input received is associated with a plurality of behavioural actions, and each parameter values inferred for is determined by a combination of said plurality of behavioural action inputs (Fig. 7.)

**Claim 23:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein the behaviour of the object is generated in real-time in response to receiving input associated with a behavioural action (12:53-61.)



**Claim 24:** Liebermann discloses a behavioural translator as claimed in claim 1, further comprising a behavioural controller arranged to generate behaviour in an object, wherein said means to receive input comprise means to receive input associated with a behavioural action (Fig. 1); said means to process received input comprise means to infer a plurality of behavioural parameter values from said input in accordance with a behavioural framework arranged to generate behaviour by the object (Fig. 7); and wherein said means to generate output comprise means to derive output from the inferred plurality of behavioural parameter values, and wherein the translator further comprises means to generate equivalent behaviour by the object using the output derived from the parameter values (Fig. 9-11.)

**Claim 25:** Liebermann discloses a behavioural translator as claimed in claim 24, wherein the means to generate equivalent behaviour comprise means to forward the output derived from the parameter values to an animation system arranged to operate on the output to cause the appropriate behaviour to be animated by the object (Fig. 7, 15.)

**Claim 26:** Liebermann discloses a behavioural translator as claimed in claim 25, wherein, said receiving means include means to receive as input at least one parameter value from a source external to the behavioural framework of the object (Fig. 11.)

**Claim 27:** Liebermann discloses a behavioural translator as claimed in claim 24, wherein the means to infer a plurality of behavioural parameter values comprises a framework of nodes, each behavioural node arranged to map at least one input parameter value to at least one output parameter value (Fig. 7, 9-12.)

**Claim 28:** Liebermann discloses a behavioural translator as claimed in claim 27, wherein at least one node is arranged to map at least one parameter value taken from the group including: a parameter defined for each node within the behavioural framework; a parameter defined within each node of the behavioural framework; and, a parameter defined externally to the behavioural framework (Fig. 7, 9-12.)

**Claim 29:** Liebermann discloses a behavioural translator as claimed in claim 14, wherein said means to receive input is arranged to receive input from a behavioural design interface, the behavioural design interface comprising: means arranged to allow the assignment of a value to a behavioural parameter set comprising at least one behavioural parameter defined according to the behavioural framework of the object; and means arranged to operate on the value assigned to the behavioural parameter set by a predetermined function to determine the value of the internal parameter (Fig. 11.)

**Claim 30:** Liebermann discloses a behavioural translator as claimed in claim 24, wherein the behavioural translator is a component in the behavioural controller and

comprises a translation element for mapping received input derived from behaviour consistent with a first culture to input consistent with a second culture (11:57-67.)

**Claim 31:** Liebermann discloses a behavioural translator as claimed in claim 24, wherein the behavioural translator comprises a translation element for mapping behavioural output consistent with a first predefined culture to behavioural output consistent with a second predefined culture (11:57-67.)

**Claim 32:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein a user provides the input to the translator (Fig. 4.)

**Claim 33:** Liebermann discloses a behavioural translator as claimed in claim 1, wherein a software agent provides the input to the translator (Fig. 1.)

**Claim 34:** Liebermann discloses a device arranged to have a suite of at least one computer programs stored thereon, the suite of at least one computer programs being executable on the device so as to cause the device to function as the translator defined in claim 1 (6:6-14.)

**Claim 36:** Liebermann discloses a method of generating behaviour in an object under the control of a behavioural controller comprising a framework of nodes and arranged for use by a behavioural translator as claimed in claim 1, the method comprising the

steps of: at least one node receiving input associated with a behavioural action; each said at least one node mapping received input to output; inferring a plurality of behavioural parameter values for other nodes in the framework using said output; and mapping the received input using said inferred behavioural parameter values to provide output by the behavioural controller which generates equivalent behaviour by the object (Fig. 11.)

**Claim 37:** Liebermann discloses a method of generating behaviour in an object under the control of a behavioural controller arranged for use by a behavioural translator as claimed in claim 1, the method comprising the steps of: receiving input associated with a behaviour action; mapping said received input to a set at least one output values which corresponds to equivalent behaviour by the object; inferring a plurality of behavioural parameter values from said set of at least one output values in accordance with a behavioural framework arranged to generate behaviour by the object; and generating equivalent behaviour in the object using said parameter values by loading these into the behavioural controller (Fig. 11.)

**Claim 38:** Liebermann discloses a method as claimed in method claim 35, wherein the parameters inferred are time-varying (Fig. 11.)

**Claim 41:** Liebermann discloses a behavioural translation device as claimed in claim 40, wherein the information is received as input by the behavioural controller (Fig. 11.)

**Claim 42:** Liebermann discloses a behavioural translation device as claimed in either claim 40, wherein the information is to be provided as output by the behavioural controller (Fig. 11.)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Belousov whose telephone number is (571) 270-1695. The examiner can normally be reached on Mon-Fri (alternate Fri off) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P Sax/  
Primary Examiner, Art Unit 2174

AB  
April 8, 2009

